

NEW SPECIES OF  
*TARAXACUM* FROM  
THE HIMALAYAN REGION

J. L. VAN SOEST

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BY

J. L. VAN SOEST

(The Hague)

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# NEW SPECIES OF *TARAXACUM* FROM THE HIMALAYAN REGION

By J. L. VAN SOEST

VERY little is known of the various forms of the genus *Taraxacum* Weber that occur in Central Asia, and from the Himalaya in particular the material available is so scanty that it is even difficult to assess properly the various sections of the genus which are represented there.

About twenty very complex species from the Himalayan region have been enumerated by Handel-Mazzetti in his *Monographie der Gattung Taraxacum* (1907), but many of these would be regarded by Scandinavian botanists, like Dahlstedt and Haglund, as groups of species rather than as species. Moreover, Handel-Mazzetti erroneously recorded from the Himalayan region several of these complex species which are distributed in Europe and the Near East but do not penetrate so far into Asia.

No other general treatment of Himalayan *Taraxacum* exists. Dahlstedt (in Act. Hort. Gothoburg. ii: 143-184 (1926)) has, however, described a number of Chinese species which extend into the Himalayan region, and Haglund has recorded several species, including five new ones, in C. Persson's list of plants from East Turkestan and Kashmir (in Bot. Notis. 1938: 307-317 (1938)). It may be hazardous to describe species as new when only a few specimens are available, especially when such specimens are from one locality only. Nevertheless, with a certain amount of hesitation, I venture to publish the following sixteen new species, and I am sure that others will be discovered when additional material becomes available from the region. One of the new species is from Chitral, three from Kashmir, four from Nepal, one from Bhutan, six from south-eastern Tibet, and one from north-western Yunnan to the east of the Himalaya.

I am most grateful to the Keeper of Botany, British Museum (Natural History), and the Directors of the Rijksherbarium, Leyden, and the Botanical Museum, Utrecht, for the loan of important material; also to the staffs of the herbaria at the British Museum, Kew, Paris, Geneva and Stockholm for facilities to work at the genus. I also wish to thank Mr. Marks of the Rijksherbarium, Leyden, for photographing the type specimens; the photographs are published here by courtesy of the Director of the Rijksherbarium.

***Taraxacum bhutanicum*** Van Soest, sp. nov. (Plate 22.)

*Planta* parva c. 4-5 cm. alta, basi incrassata valde lanigera. *Folia* subnumerosa, decumbentia, laete gramineo-viridia, glabra vel subglabra, ambitu oblanceolata,



c. 3 cm. longa (petiolo brevi pallido incluso), c. 0.5–0.8 cm. lata, utrinsecus c. 3-lobata; lobi laterales triangulares, acuti, plerumque plus minusve retroversi, dorso denticulati vel brevissime dentati; lobus terminalis triangularis vel hastatus, plerumque integer vel dentatus raro subincisus, lobulis basis subelongatis subacutis vel subobtusis. *Scapi* 1–3, breves, araneosi. *Involucrum* mediocre c. 13 mm. longum et 12 mm. latum, viride; squamae exteriores laxae appressae, lanceolatae vel ovatae, acuminatae, c. 6 mm. longae, inferne latissime pallide marginatae, supernae purpureae, inconspicue callosae vel laeves; squamae interiores late lineares, membranaceo-marginatae, apice purpurascens. *Calathium* planum radians ad 2.5 cm. diam.; ligulae luteae, marginales extus stria pallide cano-violacea notatae; antherae vacuae; styli et stigmata plus minusve sordide lutea. *Floret* verno. *Achenium* (maturum adhuc ignotum) rostratum; pappus albus.

BHUTAN: Ha, 2,700 m.; on grassy swards; 7 Apr. 1949, *Ludlow, Sherriff & Hicks 16020* (holotype in Herb. Brit. Mus.).

*T. bhutanicum* probably belongs to Handel-Mazzetti's group *Parvula*, but only an examination of ripe achenes can confirm this. It differs from *T. parvulum* DC. (included under *T. dissectum* (Ledeb.) Ledeb. by Handel-Mazzetti) by the dentate lateral lobes of the leaves and by the earlier flowering period; and from *T. dissectum* (*sensu stricto*) by the larger flower-heads and by the broader and more pronounced margin of the outer involucre bracts. From both these species *T. bhutanicum* can further be distinguished by the darker yellow flowers and by the lack of pollen.

### ***Taraxacum chitralense* Van Soest, sp. nov.**

*Planta* gracilis 4–10 cm. alta, basi fragmentis foliorum vetustorum incrassata, inferne glabra. *Folia* laete gramineo-viridia nervo mediano pallido, petiolo roseo subalato; folia exteriora ambitu oblanceolata vel lingulata, obtusiuscula, ad 10 cm. longa, integra vel breviter dentata; folia interiora utrinsecus c. 3-lobata; lobi laterales ad 3 mm. longi, subacuti, patentes, integri; lobus terminalis elongatus, subobtusus. *Scapi* ad 5, foliis subaequilongi, araneosi. *Involucrum* parvum vel mediocre ad 10 mm. longum et 12 mm. latum, pallide viride; squamae exteriores laxae appressae, ovatae, ad 5 mm. longae et 4 mm. latae, pallidae, apice violaceae, breviter cornutae; squamae interiores lineares, virides, apice violaceae, corniculatae. *Calathium* paulo radians ad 1.5 cm. diam., laete luteum; ligulae marginales planae, extus stria cano-violacea notatae; antherae polline carentes; styli et stigmata fusciscentia. *Floret* aestate. *Achenium* stramineum, 3 mm. longum (pyramide exclusa), superne spinulosum, ceterum laeve, in pyramidem conicam 0.6 mm. longam subsensim abiens; rostrum c. 3 mm. longum; pappus albus, 5 mm. longus.

PAKISTAN: Chitral, Gohkir, 3,000 m.; on edge of bog; 12 June 1958, *Bowes Lyon 898* (holotype in Herb. Brit. Mus.).

This is closely allied to *T. nepalense* Van Soest, which, however, has a densely hairy base, longer involucre bracts (the outer ones up to 7 mm.), pink and purple colour on the outside of the flowers, and a longer pyramid on the achene (2 mm.) with a longer beak (c. 5 mm.).

In leaf form *T. chitralense* resembles *T. sherriffii* Van Soest and *T. sinense* Dahlst.



*T. sherriffii* differs in its more or less hairy base, pale petioles, dark-coloured involucre, yellow stigmas, and lack of horns on the inner involucre bracts. *T. sinense* differs in many respects, e.g. the absence of horns on the bracts, the darker yellow flowers, and the longer pyramid and rostrum of the achenes.

***Taraxacum dasypodum* Van Soest, sp. nov.**

*Planta* mediocris 5–6 cm. alta, basi fragmentis foliorum vetustorum plus minusve incrassata, inferne dense longe araneoso-pilosa. *Folia* decumbentia, laete gramineo-viridia vel subcanescentia nervo mediano pallido, glabrescentia, ambitu oblanceolata, ad 7 cm. longa (petiolo pallido alato incluso) et 1.8 cm. lata, utrinsecus 2–3-lobata; lobi laterales breves ad 5 mm. longi, deltoidei vel triangulares, subacuti, subretroversi, integri; lobus terminalis sat magnus, longe hastatus, subobtusus, integer vel 1-dentatus. *Scapi* 2–3, foliis paulo breviores, araneosi. *Involucrum* mediocre 11 mm. longum et ad 13 mm. latum, pallide viride; squamae exteriores appressae, ovatae vel ovato-lanceolatae, 3–5 mm. longae, ad 2 mm. latae, inconspicue late albo-marginatae, apice corniculis violaceis instructae; squamae interiores lanceolatae, ad 2–2.5 mm. latae, subanguste pallide marginatae, apice plus minusve violaceae, callosae. *Calathium* paulo radians ad 1.8 cm. diam.; ligulae luteae, marginales planae extus roseolae apice plus minusve purpureae; antherae polline carentes; styli et stigmata lutea. *Floret* verno. *Achenium* obscure stramineum, c. 5 mm. longum, laeve, in rostrum c. 3–4 mm. longum inconspicue sensim abiens; pappus albus, 5 mm. longus.

CHINA: N.W. Yunnan, base of eastern flank of Lichiang range, 27° 10' N., 2,700 m.; in dry stony pastureland; May 1906, *Forrest 2080* (holotype in Herb. Brit. Mus.).

This species is allied to *T. nepalense* Van Soest, from which it differs by the lighter-coloured involucre, the pale pink colour of the outer side of the ligules, and, especially, the form of the achenes. The achene is smooth and passes, via an elongated pyramid, almost imperceptibly into the beak; and in this character *T. dasypodum* shows relationship with *T. brevirostre* Hand.-Mazz. which belongs to the *Parvula* group according to Handel-Mazzetti. *T. dasypodum* differs from *T. brevirostre*, however, by the longer scapes, which exceed the leaves, by the pale pink (instead of brownish-purple) colour on the outside of the ligules, and by the form of the leaves; *T. brevirostre* has linear leaves with short linear spreading side lobes and with an elongated terminal lobe, whereas *T. dasypodum* has broader leaves with a broader central lamina and with short deltoid slightly recurved side lobes.

*T. dasypodum* is related also to *T. stevenii* (Spreng.) DC., which, however, has entire leaves, bicolorous outer involucre bracts, slightly tuberculate achenes, and a more glabrous plant base. This base is thick and therefore resembles that of species of the *Parvula* group.

***Taraxacum forrestii* Van Soest, sp. nov. (Plate 23.)**

*Planta* robusta sed humilis c. 5–7 cm. alta, basi valde incrassata plus minusve araneoso-pilosa. *Folia* numerosa, decumbentia, gramineo-viridia nervo mediano pallido, araneosa, ad 6 cm. longa (petiolo brevi colorato incluso) et 1.8 cm. lata;



folia exteriora utrinsecus 6-lobata, lobis lateralibus triangularibus patentibus vel subretroversis integris vel denticulatis, lobo terminali plus minusve deltoideo obtuso ; folia interiora utrinsecus 6-8-lobata ; lobi laterales triangulares, acuti, patentes vel paulo (inferiores saepe distincte) retroversi, saepe dorso fissi vel dentati, margine inferiore saepe subbrevis dentati, interlobiis subnullis ; lobus terminalis brevis, deltoideus (lobulis basis et apicis subelongatis acutis) vel subelongato-hamatus vel ovato-hastatus dentatus. *Scapi* 2-3, foliis breviores, araneosi. *Involucrum* crassum 16 mm. longum et 18 mm. latum, sordide viride ; squamae exteriores laxae appressae, ovatae (vel interiores lanceolatae), ad 7 mm. longae et 4 mm. latae, rufo-virides, inconspicue late pallide marginatae, reticulato-venulosae, apice corniculatae ; squamae interiores late lineares, ad 2 mm. latae, atro-virides, membranaceo-marginatae, plus minusve callosae. *Calathium* radians planum ad 3.5 cm. diam. ; ligulae luteae, marginales planae extus stria cano-purpurea notatae ; antherae polliniferae ; styli et stigmata nigra. *Floret* aestate. *Achenium* (maturum adhuc ignotum) rostratum ; pappus albus.

INDIA : Uttar Pradesh, Kumaun, between Balch and Kyo Pass, 4,500-4,800 m., Aug. 1929, *Benham* (Herb. Brit. Mus.).

S.E. TIBET : Khargurpu, Mekong-Salween divide, 28° 25' N., 4,200 m. ; in open stony pasture ; July 1917, *Forrest 14424* (holotype in Herb. Brit. Mus. ; isotype in Herb. Kew).

This species appears to be related to Dahlstedt's group *Mongolica* because of the distinct network of veins on the outer involucrel bracts. It is also allied, on account of the dark styles and stigmas and the dark involucre, to *T. tibetanum* Hand.-Mazz. The *Mongolica* are not known from India and Tibet.

### ***Taraxacum glaucophyllum* Van Soest, sp. nov. (Plate 24.)**

*Planta* gracilis ad 20 cm. alta, glabra, collo fragmentis foliorum persistentibus obscure squamato ; radix crassa. *Folia* glauca nervo mediano pallido, late linearia vel lineari-oblancheolata, basin versus longius angustata, obtusa, c. 12 cm. longa (petiolo purpureo incluso), ad 1 cm. lata, minute denticulata vel sparse breviter dentata vel sublonge patent-dentata dentibus ad 3-4 mm. longis lanceolatis subobtusis, parte terminali (3 cm. longa) integra. *Involucrum* ad 15 mm. latum, atro-viride ; squamae exteriores lanceolatae, c. 6 mm. longae, ad 1.5 mm. latae, late albo- vel roseolo-marginatae, grosse deltoideo-corniculatae ; squamae interiores late lineares, 12 mm. longae, albo-marginatae, apice purpureae, corniculatae vel callosae. *Calathium* paulo radians, subclausum ; ligulae tubulosae, 16 mm. longae, pallide luteae, exteriores plus minusve purpureae ; antherae polliniferae ; styli et stigmata lutea. *Floret* aestate. *Achenium* stramineum, obovoideum, 3 mm. longum (pyramide exclusa), c. 1.3 mm. latum, cristato-spinulosum, basi laeve, superne minute spinulosum, in pyramidem conicam 1 mm. longam subabrupte abiens ; rostrum 3.5 mm. longum ; pappus albus, 6 mm. longus.

S.E. TIBET : Shugden Gompa, Nagong, 3,900-4,200 m. ; on alpine turf slopes, stony ground ; 1 Sept. 1933, *Kingdon-Ward 10803* (holotype in Herb. Brit. Mus.).

This resembles *T. stenolepium* Hand.-Mazz., but the latter has shorter scapes,



smaller horns on the involucre bracts, and ligules greyish on the outside. The achenes are clearly different: in *T. glaucophyllum* the pyramid is much longer and distinctly marked off from the more spinulose body of the achene. The achene of *T. glaucophyllum* is similar to that of *T. dealbatum* Hand.-Mazz. as figured by Handel-Mazzetti, Monogr. Gatt. Tarax.: t. 1 fig. 9 b (1907).

***Taraxacum himalaicum* Van Soest, sp. nov.**

*Planta* mediocris 4–12 cm. alta, basi fragmentis foliorum vetustorum incrassata, inferne plus minusve araneoso-pilosa. *Folia* paulo canescentia, glabra, petiolo pallido vel pallide roseolo alato vel subalato; folia exteriora ambitu oblanceolata vel lingulata, retroverso-denticulata vel dentata vel breviter deltoideo-lobata; folia interiora utrinsecus 2–4-lobata; lobi laterales 3–4 mm. longi, deltoidei vel triangulares, obtusi vel subobtusiusculi raro subacuti, dorso convexi interdum denticulati, margine inferiore integri, interlobiis 3–5 mm. latis; lobus terminalis ad 15 mm. longus, obtusus vel subobtusiusculus, subinteger. *Scapi* folia aequantes vel saepe breviter superantes, sub involucre araneosi. *Involucrum* ad 12 mm. longum, 5–6 mm. latum, basi subtruncatum, pallide viride; squamae exteriores plus minusve appressae, lanceolatae, ad 6 mm. longae, 3 mm. latae, pallide marginatae, apice purpureae, callosae; squamae interiores late lineares, membranaceo-marginatae, apice purpureae, callosae. *Calathium* subradiatum ad 2 cm. diam., (pallide?) luteum; ligulae marginales planae, extus stria cano-violacea notatae; antherae polliniferae; styli et stigmata lutea. *Floret* verno. *Achenium* aurantiacum, c. 3.5 mm. longum (pyramide exclusa), superne spinulosum ceterum laeve, in pyramidem conicam c. 1.5 mm. longam sensim abiens; rostrum 5–6 mm. longum; pappus niveus, 6–7 mm. longus.

NEPAL: Jumla, 2,250 m.; on sunny grassy slopes; 4 May 1952, *Polunin, Sykes & Williams* 900 (Herb. Brit. Mus.) (entire-leaved form). Hills north of Pokhara, 2,250 m.; on dry bank; 17 Apr. 1954, *Stainton, Sykes & Williams* 4848 (holotype in Herb. Brit. Mus.). Near Gujakhani, 2,850 m.; on grassy slopes on ridge; 12 June 1954, *Stainton, Sykes & Williams* 3090 (Herb. Brit. Mus.). Bhadauri, east of Kusma, 1,500 m.; on rock and grass bank near cultivation; 17 Apr. 1954, *Stainton, Sykes & Williams* 15 (Herb. Brit. Mus.).

This is closely allied to *T. indicum* Hand.-Mazz. but differs from it by the orange achenes and the more appressed involucre bracts. The stigmas of *T. himalaicum* are clear yellow.

***Taraxacum hooftii* Van Soest, sp. nov. (Plate 25.)**

*Planta* mediocris gracilis 10–15 cm. alta, basi glabra; radix tenuis. *Folia* laete griseo-viridia, glabra, ambitu oblanceolata, in petiolum pallidum valde decurrentia, plus minusve irregulariter dentata vel lobata; lobi laterales breves vel sat longi, triangulares, acuti, pro maxima parte retroversi; lobus terminalis haud bene limitatus, acutus vel subacutus. *Scapi* florenti tempore foliis longiores, sub involucre araneoso-lanigeri, ceterum glabri. *Involucrum* 14 mm. longum, basi rotundatum; squamae exteriores laxae appressae, plus minusve ovatae vel ovato-



lanceolatae, longe acuminatae, pallide virides vel roseolae, sublate albido-marginatae, reticulato-venulosae, glabrae, apice purpureae; squamae interiores exterioribus duplo longiores, late lineares, apice atro-violaceae. *Calathium* c. 2.5 cm. diam.; ligulae laete luteae, marginales extus stria sordide cano-violacea notatae; antherae polliniferae; styli et stigmata lutea. *Floret* aestate. *Achenium* fusco-stramineum, 3 mm. longum (pyramide exclusa), superne sat late et breviter spinulosum, in pyramidem c. 0.8 mm. longam cylindricam abrupte abiens; rostrum album, 6–7 mm. longum; pappus niveus, 5–6 mm. longus.

KASHMIR: Karakoram, Gircha, 2,500 m., 8 June 1925, *Visser-Hooft* 2 (holotype in Herb. Bot. Mus. Utrecht). Karakoram, Nubra valley, 3,200 m., 2 June 1929, *Visser-Hooft* 55 (Herb. Bot. Mus. Utrecht).

Possibly plants collected by Appleton in the Pamir and Tian Shan in 1906 (Herb. Kew) belong to this species.

In leaf form there is some resemblance between this species and *T. platypecidum* Diels, but they differ in many other respects. According to Dahlstedt (in Act. Hort. Gothoburg. ii: 145 (1926)) *T. platypecidum* belongs to his group *Calanthodia*, and the same may perhaps be true of *T. hooftii*.

### ***Taraxacum karakoricum* Van Soest, sp. nov. (Plate 26.)**

*Planta* mediocris 5–8 cm. alta, collo glabro. *Folia* terrae appressa, laete viridia nervo mediano ut petiolo alato pallido, glabra, ambitu oblanceolata, ad 7 cm. longa, utrinsecus c. 3-lobata; lobi laterales breves, late triangulares vel deltoidei, obtusi vel subobtusi, subintegri; lobus terminalis parvus, brevis, interdum inaequilaterus, plus minusve triangulari-rhomboideus. *Scapi* ad 3, parce (sub involucro dense) araneoso-pilosi. *Involucrum* ad 15 mm. longum, basi inconspicue truncatum, nitide viride; squamae exteriores laxae appressae vel patentes, lanceolatae, ad 7 mm. longae, late albo- vel virescenti-marginatae, inconspicue reticulato-venulosae, margine interdum erosae, apice longe cornutae; squamae interiores callosae vel corniculatae. *Calathium* radians ad 3.5 cm. diam.; ligulae luteae, marginales extus stria rufo-purpurea notatae; antherae polliniferae; styli et stigmata leviter fuscescentia. *Floret* aestate. *Achenium* (maturum adhuc ignotum) rostratum, superne spinulosum; pappus albus.

KASHMIR: Karakoram, Lashi valley, 4,800 m.; in humid pasture; 8 Aug. 1922, *Visser-Hooft* 40 (holotype in Herb. Bot. Mus. Utrecht).

This belongs to Dahlstedt's group *Ceratophora*.

### ***Taraxacum kashmirens* Van Soest, sp. nov.**

*Planta* mediocris ad 20 cm. alta, collo subglabro. *Folia* obscure viridia, subglabra, sublobata vel patentia-vel retroverso-dentata, lobis lateralibus et dentibus acutissimis. *Scapi* florendi tempore foliis subaequilongi, sub involucro subaraneosi. *Involucrum* atro-viride (in sicco nigrum); squamae pro parte subcallosae, exteriores laxae appressae lanceolatae vel pro parte lineares, interiores late lineares. *Calathium* c. 1.5 cm. diam.; ligulae luteae, marginales extus stria fusco-violacea notatae;



antherae polliniferae; styli et stigmata subnigra (in sicco nigra). *Floret* aestate. *Achenium* maturum adhuc ignotum.

KASHMIR: Vishansar, 3,600 m.; on open ground; 17 Aug. 1940, *Pinfold* 373 (holotype in Herb. Brit. Mus.).

This species differs from *T. tibetanum* Handl.-Mazz., with which it is closely allied, by the smaller flower-heads with narrow outer involucre bracts; the leaves are sublobate or only dentate, with spreading or retroverse teeth.

### ***Taraxacum lanigerum* Van Soest, sp. nov. (Plate 27.)**

*Planta* robusta sed humilis 7–9 cm. alta, basi fragmentis foliorum vetustorum valde incrassata, inferne longe araneoso-pilosa pro parte lanigera. *Folia* numerosa, laete gramineo-viridia, supra purpureo-maculata, utrinque araneoso-pilosa inferne sublanigera, ad 10 cm. longa et 3 cm. lata, utrinsecus 5-lobata, petiolo badio-purpureo subalato vel subangusto; lobi laterales hamati vel triangulares vel falcati, summo elongati subobtusiusculi vel subacuti, retroversi, dorso plerumque valde convexi dentati, interlobiis sat brevibus (3–5 mm.) ad 5 mm. latis saepe dentatis; lobus terminalis subhastatus, lobulis basis saepe valde elongatis retroversis, lobulo apicis obtuso vel subacuto. *Scapi* 2–4, araneosi, sub involucre dense longe araneoso-pilosi. *Involucrum* magnum crassiusculum 19 mm. longum et 25 mm. latum, subnigrum; squamae exteriores appressae, lanceolatae, 12 mm. longae, 2.5 mm. latae, subanguste albo- vel viridi-marginatae, corniculatae, superne et in margine araneoso-pilosae; squamae interiores late lineares, late marginatae, callosae, araneoso-pilosae. *Calathium* planum radians ad 4 cm. diam.; ligulae luteae, marginales extus stria subnigra ornatae; antherae polliniferae; styli et stigmata nigra. *Floret* aestate. *Achenium* maturum adhuc ignotum; pappus albus.

S.E. TIBET: Ata Kang La, Nagong, 3,900–4,200 m.; in pastures; 16 July 1933, *Kingdon-Ward* 10596 (holotype in Herb. Brit. Mus.).

This species is related to *T. lugubre* Dahlst., found in western China, differing from it by the dark-spotted leaves with still more elongated side lobes and dark purple petiole, by the shorter scapes, and by the larger involucre (only 16 mm. long in *T. lugubre*) with lanceolate (instead of ovate) outer bracts provided with small horns.

Like most plants of its group (*Calanthodia* Dahlst.) it is a beautiful one; the yellow flowers are in splendid contrast to the black involucre and the very dark styles.

### ***Taraxacum ludlowii* Van Soest, sp. nov. (Plate 28.)**

*Planta* ad 35 cm. alta, basi rubra glabra. *Folia* erecta, gramineo-viridia nervo mediano lucide albo vel pro parte rubescenti, glabra, ambitu lingulata, ad 20 cm. longa (petiolo excluso), utrinsecus c. 6-lobata, petiolo rubro-violaceo angusto ad 10 cm. longo; lobi laterales ad 12 mm. longi, angusti, plus minusve falcati, acutissimi, patentes vel erecto-patentes vel retroversi, integri vel dorso 1-dentati, interlobiis sat longis (ad 20 mm.) et c. 6–10 mm. latis integris; lobus terminalis ad 35 mm. longus, elongato-hastatus, acutus, lobulis basis angustis acutis patentibus vel oblique patentibus. *Scapi* florendi tempore foliis longiores, subcrassi, inferne pur-

purei, sub involucro araneosi. *Involucrum* 15 mm. longum, atro-viride; squamae exteriores lanceolatae, summo lineares valde attenuatae, ad 10 mm. longae, inconspicue anguste albo-marginatae, pro parte corniculatae vel cornutae; squamae interiores late membranaceo-marginatae. *Calathium* radians planum 4 cm. diam.; ligulae saturate luteae, marginales planae extus stria purpurea vel roseola notatae; antherae polliniferae; styli sordide lutei, stigmatibus fusco-virescentibus. *Floret* aestate. *Achenium* maturum adhuc ignotum; pappus sordide albus.

S.E. TIBET: Reting, 60 miles north of Lhasa, 4,200 m.; on grassy hill slopes; 30 July 1942, *Ludlow & Sherriff 8951* (holotype in Herb. Brit. Mus.). Vicinity of Lhasa, 3,900 m., July 1939, *Richardson 307* (Herb. Brit. Mus.).

*T. ludlowii* has in common with several species of Central Asia a certain shape of the leaves, e.g. *T. sinense* Dahlst., *T. cuspidatum* Dahlst. and *T. stenolepium* Hand.-Mazz.; from these it differs by the long horns on the outer involucre bracts which themselves are longer and more elongated.

*T. glaucophyllum* Van Soest is closely allied to *T. ludlowii*, but it has clear yellow stigmas and a much more distinct margin to the outer involucre bracts; furthermore, the terminal lobe of the leaves is obtuse in *T. glaucophyllum* and acute in *T. ludlowii*.

*T. staticifolium* Van Soest may also be related, but its leaves are linear and nearly entire, while the involucre bracts lack horns.

### ***Taraxacum mucronulatum* Van Soest, sp. nov.**

*Planta* robusta ad 25 cm. alta, inferne glabra. *Folia* erecta, luteo-viridia, ad 20 cm. longa et 4 cm. lata, dentata (folia exteriora) vel sublobata vel utrinsecus 2-3-lobata, petiolo pallido paulo roseo-colorato alato; lobi laterales triangulares, acuti, purpureo-mucronulati, patentes vel paulo retroversi, integri vel rare dorso denticulati vel 1-dentati, interlobiis latiusculis vulgo 5-15 mm. latis; lobus terminalis longe deltoideus vel deltoideo-hastatus, acutus, mucronatus, integer vel interdum inciso-dentatus. *Scapi* ad 3, sub involucro araneosi. *Involucrum* cylindrico-ovoideum ad 20 mm. longum, c. 12 mm. latum, basi rotundatum; squamae exteriores plus minusve appressae, ovato-lanceolatae, ad 8 mm. longae et 3 mm. latae, virides, inferne late albido- vel submembranaceo-marginatae; squamae interiores late lineares, membranaceo-marginatae, omnes apice violaceae, callosae. *Calathium* submagnum; ligulae marginales planae, c. 25 mm. longae, flavae (?), extus plus minusve roseolae et stria violacea notatae, summo purpureae; antherae polline carentes; styli lutei. *Floret* aestate. *Achenium* stramineum, c. 4 mm. longum (pyramide exclusa), superne breviter spinulosum, in pyramidem 1.5 mm. longam sensim abiens; rostrum 7 mm. longum; pappus albus, c. 7 mm. longus.

NEPAL: Chutta, S.E. of Jumla, 3,000 m.; beside track; 25 July 1952, *Polunin, Sykes & Williams 4912* (holotype in Herb. Brit. Mus.).

This tall-growing plant resembles in leaf form those of Dahlstedt's group *Vulgaria*, such as *T. alatum* Lindb. f. and *T. retroflexum* Lindb. f., but the flower-heads and achenes are very different, showing relationship to *T. dasypodium* Van Soest, *T. nepalense* Van Soest and *T. stenolepium* Hand.-Mazz.; the outer involucre bracts



are ovate-lanceolate and have a broad white or often pink margin and a purple apex with more or less small horns.

The form of the achenes, which are shortly spinulose above, is characterized by a gradual elongation into a relatively long pyramid. In common with Dahlstedt's group *Vulgaria* the achene of *T. mucronulatum* has a long beak, measuring 7 mm. instead of 3–5 mm. as in *T. dasypodium*, *T. nepalense* and *T. stenolepium*.

***Taraxacum nepalense* Van Soest, sp. nov. (Plate 29.)**

*Planta* gracilis ad 12 cm. alta, basi lanigera. *Folia* erecta, gramineo-viridia petiolo plus minusve roseolo, glabra, ambitu oblanceolata, 5–7 cm. longi, integra vel retroverse denticulata dentatave vel patenter lobata; lobi laterales breves ad 4 mm. longi, acuti, integri. *Scapi* 1–3, araneoso-pilosi. *Involucrum* crassiusculum, viride; squamae exteriores appressae, ovato-lanceolatae, 5–7 mm. longae, 3–4 mm. latae, late pallido-marginatae, nervo mediano viridi summo subnigro, corniculatae; squamae interiores late lineares, membranaceo-marginatae, corniculatae, apice atro-virides. *Calathium* paulo radians ad 2.5 cm. diam.; ligulae pallide luteae, marginales planae extus roseolae striae purpurea ornatae; antherae polline carentes; styli et stigmata fusciscentia. *Floret* aestate. *Achenium* stramineum, c. 5.5 mm. longum (pyramide inclusa), superne spinulosum, ceterum rugosum, in pyramidem conicam 2 mm. longam sensim abiens; rostrum breve c. 5 mm. longum; pappus albus, 5 mm. longus.

NEPAL: Khaptar forest, 1 June 1929, *Bis Ram* 505 (holotype in Herb. Brit. Mus.). Marsiandi valley, 3,390 m.; on dry ground under big juniper trees; 11 July 1950, *Lowndes* 978 (Herb. Brit. Mus.) (styles more yellowish).

This species is allied to *T. porphyranthum* Boiss.; both have purplish flowers and their leaf form is rather similar. In *T. porphyranthum*, however, the outer involucre bracts are narrowly margined, whereas in *T. nepalense* the green field of the bracts is nearly restricted to the median line. Moreover, the achenes of the two species differ considerably and the area of distribution of *T. porphyranthum* lies in western Asia.

*T. nepalense* is allied also to *T. hooftii* Van Soest, which has almost the same leaf form but differs from *T. nepalense* by its yellow flower-heads with larger involucre bracts.

***Taraxacum pseudostenoceras* Van Soest, sp. nov.**

*Folia* laete viridia nervo mediano ut petiolo purpureo, glabrescentia; folia exteriora subintegra; folia interiora utrinsecus 2–4-lobata; lobi laterales integri, magis retroversi. *Scapi* florendi tempore foliis subaequilongi. *Involucrum* c. 14 mm. longum, basi ovoideum; squamae exteriores plurimae, subappressae, ovato-lanceolatae, in apicem protractae, submarginatae, longissime anguste cornutae; squamae interiores cornutae. *Calathium* radians c. 4 cm. diam.; ligulae laete luteae, planae, extus stria rubro-purpurea notatae; antherae polliniferae; styli et stigmata sordide pallide lutea. *Floret* aestate. *Achenium* maturum adhuc ignotum.

NEPAL : Mustang, 4,500 m. ; on open grass slopes ; 5 Aug. 1954, *Stainton, Sykes & Williams 2189* (holotype in Herb. Brit. Mus.).

Although having a very different leaf form this new species is closely allied to *T. stenoceras* Dahlst., which it resembles especially in the long-horned involucre bracts. According to Dahlstedt (in Act. Hort. Gothoburg. ii: 166 (1926)) *T. stenoceras* belongs to his group *Ceratophora*, but he mentions a few striking differences from the more typical forms of this group, e.g. the very narrow outer bracts and the form of the long and narrow horns. I doubt whether *T. stenoceras* and *T. pseudostenoceras* really belong to this group.

***Taraxacum sheriffii* Van Soest, sp. nov.**

*Planta* gracilis 10–12 cm. alta, basi fragmentis foliorum vetustorum incrassata, inferne plus minusve araneoso-pilosa. *Folia* paulo canescentia nervo mediano pallido, plus minusve araneoso-pilosa, ambitu lingulata, ad 15 cm. longa (petiolo incluso) et 1·8 cm. lata, petiolo pallido subangusto superne dentato in laminam sensim abienti ; folia exteriora obtusa, subintegra vel utrinsecus c. 3-lobata, lobis deltoideis ; folia interiora utrinsecus 5-lobata ; lobi laterales angusti, lanceolati vel lineares, subobtusiusculi, patentes, integri vel rare dorso 1-dentati, interlobiis sat longis (ad 15 mm.) et c. 3 mm. latis ; lobus terminalis sat magnus, inaequilaterus, subobtusiusculus, lobulis basis angustis patentibus vel subreflexis. *Scapi* 2–3, florendi tempore foliis subaequilongis, sub involucre araneoso-pilosi vel glabrescentes. *Involucrum* mediocriter subcrassiusculum 11 mm. longum et 15 mm. latum, atro-viride ; squamae exteriores appressae, lanceolatae, acuminatae, atro-virides, late albo-vel viridi-marginatae, cornutae ; squamae interiores lineares, membranaceo-marginatae, laeves. *Calathium* paulo radians planum 2–2·5 cm. diam. ; ligulae luteae, marginales planae extus stria cano-purpurea notatae ; antherae polliniferae ; styli et stigmata lutea. *Floret* verno. *Achenium* (maturum adhuc ignotum) rostratum ; pappus sordide albus.

S.E. TIBET : Lhasa, 3,540 m. ; on grassy waste land ; 26 May 1942, *Ludlow & Sherriff 8616* (holotype in Herb. Brit. Mus.).

The same gathering included specimens (*Ludlow & Sherriff 8616a*) of *T. eriopodium* Hand.-Mazz., allied to *T. sheriffii*, but the latter has narrow and long-lobed leaves, and darker-coloured involucre bracts with broader white or green margin ; moreover the flowers of *T. eriopodium* are more lightly coloured on the outside.

In leaf form *T. sheriffii* is comparable with *T. sinense* Dahlst. and also with *T. sikkimense* Hand.-Mazz., the latter having red achenes and lacking horns on the involucre bracts.

*T. sheriffii* seems to be closely allied to *T. pseudostenoceras* Van Soest, but the latter is more glabrous, has fewer and more recurved lateral lobes of the leaves, purple petioles and midribs, bigger flower-heads and smooth yellow stigmas.

***Taraxacum staticifolium* Van Soest, sp. nov.**

*Planta* tenuis c. 12 cm. alta, collo obscure squamato glabro ; radix gracilis. *Folia*



glabra, lineari-oblongata, plicata, subacuta, ad 6 cm. longa et 0.5 cm. lata, integra vel sparsissime denticulata, petiolo pallido. *Scapi* singuli, tenues, pallidi, sub involucri araneosi. *Involucrum* parvum 10 mm. longum, obscure atro-viride; squamae exteriores laxae appressae, apice recurvae, lanceolatae, 4-6 mm. longae, ad 1.2 mm. latae, immarginatae, ciliolatae, apice laeves; squamae interiores late lineares, membranaceo-marginatae. *Calathium* plus minusve radius c. 2.5 cm. diam.; ligulae luteae, marginales planae extus stria cano-violacea notatae; antherae polline carentes; styli et stigmata fusciscentia. *Floret* aestate. *Achenium* adhuc ignotum.

S.E. TIBET: Gyantse, 4,200 m.; in marshy ground; 7 June 1925, *Ludlow 124* (holotype in Herb. Brit. Mus.).

The material is poor, only one specimen being available. The linear-oblong leaves resemble those of *T. leucanthum* (Ledeb.) Ledeb., but the latter species has white flowers and broadly margined outer involucrial bracts. On his label the collector of the new species has noted "Flowers pale yellow", but "pale" seems more applicable to the other plant on the same sheet, which is indeterminable.

*T. staticifolium* may be related to *T. sinense* Dahlst., from which, however, it differs in several ways. The leaves of *T. sinense* have linear or deltoid lateral lobes which can reach a length of 10 mm., and the petiole is purple-violet, not pale as in *T. staticifolium*. Moreover, the involucre in the latter species is much darker, and the anthers lack pollen.

PLATE 22

*Taraxacum bhutanicum* Van Soest.





PLATE 23

*Taraxacum forrestii* Van Soest





PLANTAE FORRESTIANAE.  
Explorations of George Forrest, 1917-1919

No. 15

Yunnan

Holotype of *Taraxacum forrestii* Van Soest

PLATE 24

*Taraxacum glaucophyllum* Van Soest





10803

British Museum Expedition

FLORA OF TIBET 1933

Capt. F. Kingdon-Ward

No.

Loc.

Holotype of *Taraxacum glaucophyllum* Van Soest

PLATE 25

*Taraxacum hoofii* Van Soest





PLATE 26

*Taraxacum karakoricum* Van Soest





TYPE!

|                                       |                                |
|---------------------------------------|--------------------------------|
| Karakorum Expedition.                 |                                |
| Plants collected during the year 1922 |                                |
| by Mr. Visser and Mr. Visser & Hoof   |                                |
| N <sup>o</sup> 40                     | <i>Taraxacum officinale</i> m. |
| Locality                              | Karakorum                      |
| Collector                             | Visser & Hoof                  |
| Date                                  | 17.11.1922                     |

202800

Holotype of *Taraxacum karakoricum* Van Soest

PLATE 27

*Taraxacum lanigerum* Van Soest



10596



British Museum Expedition  
FLORA OF TIBET 1933  
Capt. F. Kingdon-Ward

Locality

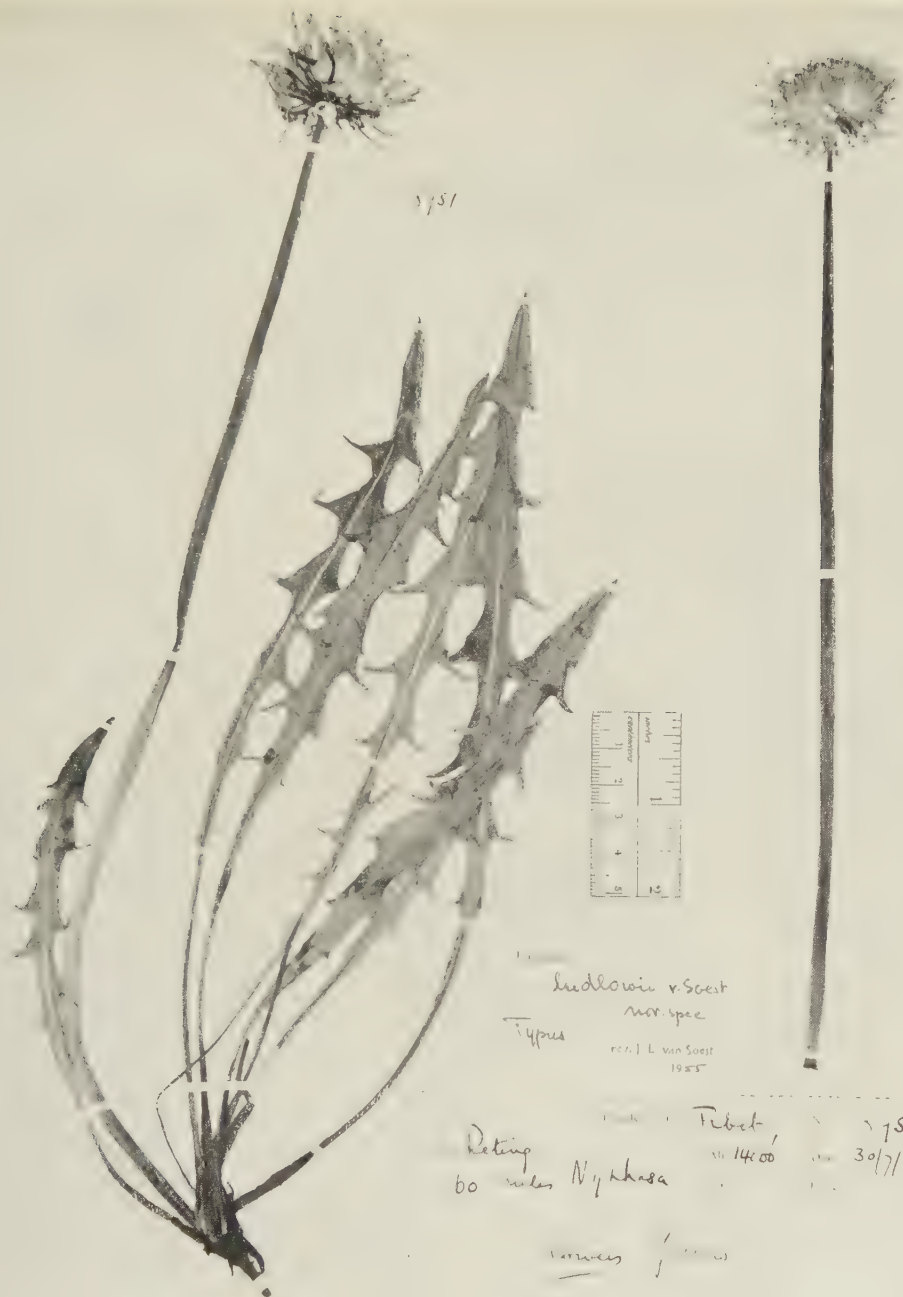
Taraxacum

Van Soest

Holotype of *Taraxacum lanigerum* Van Soest

PLATE 28

*Taraxacum ludlowii* Van Soest



*ludlowii* v. Soest  
nov. spec.  
Types  
det. J. L. van Soest  
1955

Detung  
60 miles N. Y. Khasa  
Tibet,  
alt. 14,000  
2751  
30/7/42

various forms

Coll. Ludlow & Sheratt

Holotype of *Taraxacum ludlowii* Van Soest



PLATE 29

*Taraxacum nepalense* Van Soest



11051556

FLORA OF WEST NEPAL.

110505.

*Taraxacum officinale*, Willd.

Sh. - pine forest -

Am b.

Date / 6 1927. Collector Bis Ram.

Holotype of *Taraxacum nepalense* Van Soest









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